

REMARKS/ARGUMENTS

Re-examination and favorable reconsideration are respectfully requested in view of the following comments.

Claims 28 - 63 are pending in the application.
Currently, all claims stand rejected.

By the present amendment, claims 28, 30, 31, 47 - 49, 54, 55, 59, 60, 62, and 63 have been amended and claims 52 and 53 have been cancelled without prejudice.

In the office action mailed April 2, 2009, claims 28 and 30 - 32 were rejected under 35 U.S.C. 103(a) as being Unpatentable over German Patent No. 1511577; claims 29 and 33 - 39 were rejected under 35 U.S.C. 103(a) as being unpatentable over the '577 patent in view of U.S. Patent No. 2,977,729 to Frechtmann et al.; and claims 40 - 46 were rejected under 35 U.S.C. 103(a) as being unpatentable over the '577 patent in view of Frecthmann et al. and U.S. Patent No. 4,759,814 to Katz. The office action contains no rejection of claims 47 - 63.

The foregoing rejections are traversed by the instant response.

Claim 28 is directed to a process for the production of elements made from or comprising a PCM latent heat storing material provided with a sheathing, said process comprising the steps of: providing a PCM latent heat storing material having a phase change temperature in the range of 15 to 40°C, extruding a tube from a synthetic material, feeding said PCM latent heat storing material continuously or intermittently, filling or introducing said PCM latent heat storing material into the freshly extruded tube and forming a granular material by subdividing the PCM-filled tube into a plurality of tube sections having at

least one of a length and a cross section in the range of 3.0 to 7.0 mm.

Basis for the amendments to claim 28 can be found in former claim 53; claim 49; and paragraph [0057] of the publication of the instant application.

PCMs are used for regulating temperature conditions in rooms. Therefore, PCMs are special materials with special characteristics. It is not possible to use any material as a PCM. One special characteristic of the PCM is the phase change temperature. As set forth in claim 28, the phase change temperature of the claimed PCM is in the range of 15 to 40°C. A further important characteristic for a PCM for the purpose of regulating temperature condition in rooms is that the PCM-layer which is embedded or introduced in any layer has a short reaction time/reacts quickly on a change of temperature. In this regard, it has been found that the PCM should be in the form of a granular. However not any granular may be used to fulfill the necessary requirements. It has been found that the granular should be made of PCM filled tube sections with a length and/or a cross section in the range of 3 to 7 mm. A granular consisting of tube sections with such low dimensions may be very easily processed, especially in combination with other films, and has a very low layer thickness or height. Another very important effect of the granular is that it has a rather quick reaction time for any changes of temperature conditions. The reason for the quick reaction time is that the granular has a very high outer surface and each granular piece includes only a very low amount of PCM so that this material may change phase very quickly.

With regard to the rejection of claim 28 on obviousness grounds, the cited German patent document discloses a process and a device for packaging sulfur, paraffine wax and asphalt. The whole document describes that the material to be packaged is heated to get it in a liquid condition and then it is filled in a tube. Then the tube is divided into tube sections. The tube sections with the packaged material inside enters a cooling bath, where the material in the tube sections is cooled down and becomes solid. The materials described in the '577 patent document are not PCM materials. Sulfur has a melting temperature of 113°C, soft paraffine has a melting temperature of 45°C, hard paraffine has a melting temperature between 50 and 60°C. On page 9, first paragraph, of the '577 patent document, there is mentioned that the asphalt is filled in the tube at a temperature of about 210°C. The reason that the material changes the temperature in this document is that the filling of the tubes and the handling of the material requires that the materials are liquid. Therefore, they are heated. After filling, the materials are cooled down and get solid in the cooling bath.

Still further, it appears that the '577 patent document teaches the production of bulky tube sections. It does not make sense to fill for example asphalt in very small amounts in small tube sections. Considering the applicant of the '577 patent (Esso), it seems that this document describes the handling of certain products resulting from a refinery process.

In conclusion, the '577 patent has nothing to do with the present invention and would not render it obvious in

any way. There is no reason for one having the '577 patent before him/her to arrive at the method steps set forth in amended claim 28, in particular the use of a PCM material having the claimed phase change temperature and/or the formation of a granular material having tube sections of the size claimed.

Claims 30 - 32 are allowable for the same reasons as claim 28 as well as on their own accord.

With respect to the rejections of claims 29 and 33 - 46 under 35 U.S.C. 103(a), the references to Frechtman et al. and Katz fail to cure the aforementioned deficiencies of the '577 patent document. While Frechtman et al. and Katz relate to certain methods for forming sealed packages or for extrusion coating and lamination, these patents do not concern the use of PCM and do not mention forming a PCM granular with tube sections of the size claimed. Consequently, claims 29 and 33 - 46 are allowable for the same reasons as claim 28 as well as on their own accord.

For the foregoing reasons, the instant application is believed to be in condition for allowance. Such allowance is respectfully solicited.

Should the Examiner believe an additional amendment is needed to place the case in condition for allowance, the Examiner is hereby invited to contact Applicants' attorney at the telephone number listed below.

The instant amendment should be entered since it places the case in condition for allowance. Further, it does not raise any new issue which requires further consideration and/or search on the part of the Examiner and does not raise any issue of new matter.

A notice of appeal and a three month request for extension of time is enclosed herewith.

The Director is hereby authorized to charge the notice of appeal and extension of time fees in the amount of \$1650 to Deposit Account No. 02-0184. Should the Director determine that an additional fee is due, he is hereby authorized to charge said fee to said Deposit Account No. 02-0184.

Respectfully submitted,
DIETER JABLONKA ET AL.

By/Barry L. Kelmachter #29999/
Barry L. Kelmachter
Bachman & LaPointe, P.C.
Attorney for Applicants
Reg. No. 29,999
Tel: (203) 777-6628
Fax: (203) 865-0297
Email: docket@bachlap.com

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